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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,621	06/07/2000	Sara Ruhina Biyabani	004860.P2438	8620

7590 12/13/2005
Sheryl Sue Holloway
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EXAMINER

CASCHERA, ANTONIO A

ART UNIT PAPER NUMBER

2676

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/589,621

Applicant(s)

BIYABANI, SARA RUHINA

Examiner

Antonio A. Caschera

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-9, 11-14, 16-21 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-9, 11-14, 16-21 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 2-9, 11-14, 16-21 and 23-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In reference to claims 2, 11, 16 and 23, the specification does not adequately describe, in such a way as to enable one skilled in the art, the claim limitations of the frame-preparation memory being mapped into a physical device for the main memory and the address space for the refresh memory being mapped to a physical memory device for a dedicated memory that is separate from the physical memory device for the main memory (see last 4 lines of claim 2, for example). It is not clear, in view of the specification or drawings, how Applicant's invention utilizes a unified memory architecture while consisting of separate physical memories. The specification solely states, "In the present invention, the memory controller 201 logically partitions the address space of the color buffer 204 into a frame-preparation memory 205 and a refresh memory 207. The address space of the frame-preparation memory 205 is mapped to the main memory 203, while the address space of the refresh memory 207 is mapped to a separate, dedicated memory," (see page 11, lines 5-11 of the specification). Further, the drawings do not

Art Unit: 2676

show any indication that there are separate physical memory devices utilized with a unified memory architecture in the invention (further see *Response to Arguments* below).

No further prior art search may be preformed at this time due to the lack of clarity of the claim limitations in view of the specification and which does not enable the Examiner to fully understand the invention.

Response to Arguments

2. Applicant's arguments filed 09/22/05 have been fully considered but they are not persuasive.

In reference to claims 2-9, 11-14, 16-21 and 23-26 and the rejection under 35 U.S.C 112 1st paragraph, Applicant argues that the invention at hand utilizes a unified memory architecture comprising one memory controller for the main and video memories whereby the memory controller maps the frame-preparation memory to the main memory and the refresh memory to a separate, dedicated memory (see page 10, 3rd paragraph of Applicant's Remarks). Further, the Applicant states that such architecture is in contrast to a non-unified memory architecture that consists of separate memory controllers for the main and video memories (see page 10, 3rd paragraph (last 3 lines) of Applicant's Remarks).

The Office maintains the current 35 U.S.C 112, 1st paragraph rejection. The Office believes Applicant is misinterpreting the accepted meaning of the term, "unified memory architecture" or "UMA." Such a term, as commonly known to one of ordinary skill in the art, is defined as using, "...part of the computer's main memory for video memory..." (see "What is UMA?", Webopedia, <http://www.webopedia.com/TERM/U/UMA.html>, Date accessed

Art Unit: 2676

12/05/2005). UMA is commonly directed towards the actual configuration of memory and not the sharing of a memory controller by memory devices, as suggested by Applicant. The Office further believes that due to this misinterpretation, the Applicant as written the claims and specification describing architecture which is in fact, not a unified memory architecture. For example, the specification states, "In the present invention, the memory controller 201 logically partitions the address space of the color buffer 204 into a frame-preparation memory 205 and a refresh memory 207. The address space of the frame-preparation memory 205 is mapped to the main memory 203, while the address space of the refresh memory 207 is mapped to a separate, dedicated memory," (see page 11, lines 5-11 of the specification). In a UMA configured memory, the frame-preparation memory and refresh memory would, as the term UMA is accepted as defining as seen above, be comprised within a single memory device, i.e. the main memory. In contrast however, the claims describe the frame-preparation memory mapped into a physical device for main memory while the refresh memory mapped into a physical memory device that is separate from the physical memory device for the main memory (see last 4 lines of claim 2, for example). Such architecture contradicts the above accepted configuration of memory in a computer system as seen above, in view of the definition of UMA. Therefore, the Office maintains the 35 U.S.C. 112, 1st paragraph rejection of the claims since the invention was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

3. Applicant's arguments, see page 11 of Applicant's Remarks, filed 09/22/05, with respect to the 35 U.S.C 112, 2nd paragraph rejections have been fully considered and are persuasive. The 35 U.S.C. 112, 2nd paragraph rejections of 2-9, 11-14, 16-21 and 23-26 has been withdrawn since

Art Unit: 2676

an amendment to the independent claims omits the limitation that the refresh memory is within main memory (see newly amended claim 2, line 5, for example).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778.

Any response to this action should be mailed to:

Art Unit: 2676

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

aac



12/5/05